

REMARKS

In connection with the Request for Continued Examination submitted concurrently herewith, along with a Petition for a one month extension of time, Applicant responds to the rejections of all pending claims made in the final Office Action mailed December 13, 2007, with the exception of claims 8 and 49 which are canceled without prejudice.

In that Action, the Examiner made final rejections of claims 1, 3-7, 9-17, 20-21, 24-25, 37-43, and 47-48 as anticipated by, or in the alternative, obvious in view of U.S. Patent No. 4,889,764 to Chenoweth et al ("Chenoweth"). Claim 1 reads on a conformable surfacing veil "consisting essentially of" a plurality of structural fibers and a plurality of bicomponent fibers coupled to the plurality of structural fibers. Each of the plurality of bicomponent fibers has a core substantially surrounded by an outer polymer annulus. According to this claim, the plurality of structural fibers comprise one or more irregularly shaped fibers, said one or more irregularly shaped fibers having a melting point significantly higher than said outer polymer annulus. Consequently, the outer polymer annulus upon being heated at or to the melting point bonds with the structural fibers to form a tough, but flexible and stretchable conformable veil with a softer feel than a comparable veil bonded with an equivalent amount of thermosetting acrylic binder.

Claim 39 more specifically requires that one or more irregularly shaped fibers has a melting point at least 100 degrees Fahrenheit higher than a melting point said outer polymer annulus, and claim 47 still more specifically requires that the melting point of the outer polymer annulus is

at least 100 degrees Fahrenheit lower than a melting point of the core and a melting point of the plurality of structural fibers.

Applicant previously traversed these rejections on the ground that Chenoweth fails to mention in any express fashion the melting point of the synthetic fibers 14 relative to that of the sheath 20 of the bicomponent fibers 16. Therefore, it is simply impossible to know whether the requirements of these claims are met. In such a case, it cannot be that this reference expressly discloses the exact same invention claimed, such that an anticipation rejection would be proper.

Despite having previously expressly agreed with this deficiency of Chenoweth (*see* the Office Action of May 16, 2007, page 6, second paragraph, “Chenoweth et al. does not explicitly teach the claimed melting point of the irregularly shaped fibers being significantly higher than the outer polymer annulus”), the Examiner takes a contrary position in finally rejecting the claims at issue as being expressly anticipated by this reference. Specifically, the Examiner asserts that Chenoweth teaches synthetic fibers 14 made of Dacron polyester, and further specifies that bicomponent fibers 16 “have a Dacron polyester core having a melting point of 485 degrees F and a sheath having a melting point of at least about 100 degrees lower than the melting/bonding point of the core, in particular 285 degrees F” (Office Action of December 13, 2007, p. 3, ¶ 6). Based on this allegation, the Examiner assumes the melting point of the synthetic fibers 14 of Dacron polyester must necessarily be 485 degrees F, which would be “significantly” or 100 degrees higher than the 285 degree F melting point of the sheath of the bicomponent fibers 16, and thus posits this reference meets the terms of the subject claims.

Claims 1, 39 and 47 now require that the inventive veils consist “essentially of” the claimed arrangements of fibers. This transitional phrase limits the scope of this claim to the specified elements and those “that do not materially affect the basic and novel characteristic(s)” of the claimed invention. MPEP 2111.03.

Insiputably, all embodiments of the product disclosed in Chenoweth require a thermosetting resin as a binder for the fibers 12, 14, 16. Indeed, Chenoweth even describes that an “object of the present invention . . . [is] to provide a non-woven matrix of glass and homogeneous and bi-component synthetic fibers having a thermosetting resin dispersed therethrough” (col. 3, lines 34-37). This reference further teaches that the use of such a resin “affects density and loft” (col. 6, lines 13-14).

The use of such resin as a binder in connection with the fiber matrix is advantageously avoided in the claimed inventions. As described in the examples provided in the specification, the omission of the binder produces a “tough, stretchy” veil “with a . . . [much] softer feel than standard glass veils” (see ¶ 47 of Applicant’s published specification). In another example, the inventive veil is “much more flexible and has a much softer feel than Owens Corning VL8101 reinforcement mat . . . comprised of the same glass fibers but bonded with an amount of thermosetting acrylic binder” (see ¶ 47 of Applicant’s published specification; emphasis added). As is thus indicated throughout Applicant’s specification, the addition of an “equivalent” amount of thermosetting resin of Chenoweth as a binder for the fibers thus affects the basic and novel characteristics of the claimed invention (for example, its flexibility, feel, and toughness), and is now specifically excluded by the adjustment made to claims 1, 39, and

47. Accordingly, the inventions of these claims are not anticipated by Chenoweth.

These claimed inventions also cannot be considered obvious in view of the teachings of Chenoweth, which again is expressly limited to the use of a significant amount (up to 20% by weight) of thermosetting resin as a binder. A skilled artisan reviewing its teachings would thus be dissuaded from following the direction taken by the Applicant, which is omitting the binder to produce an improved product. Nothing at all in Chenoweth discloses, teaches, or even suggests the improved veil being claimed.

Applicant also requests reconsideration of the rejections of claims 44-46 and 50 as being directed to "obvious" inventions in view of the teachings of Chenoweth in view of U.S. Patent No. 5,571,592 to McGregor et al. ("McGregor"). In making the rejection, the Examiner admits that Chenoweth does not disclose or even remotely mention the claimed microspheres. Accordingly, citation is made to McGregor for a teaching of microspheres. In making the rejection, the Examiner acknowledges that McGregor mentions that providing microspheres in a binder of the type disclosed in Chenoweth "might not be a desired configuration," but concludes that McGregor nonetheless provides "motivation to incorporate microspheres into the non-woven product of Chenoweth" (final Office Action of 12/13/07, p. 5, lines 1-2).

The Examiner's statement is based on a selective and overly narrow interpretation of McGregor, and not on its teachings as a whole. McGregor specifically states that "[t]he problem with . . . previous attempts to use microspheres with a binder material is that the binder materials tend to limit many desirable properties of thermal insulation" (col. 2, ll. 31-34). McGregor then goes on to discuss the various problems associated with

the use of a binder, and the espouses a desire for “[t]he use of spheres alone or unadhered in thermal insulation” (col. 2, ll. 43-44) (emphasis added). In other words, the teaching of McGregor is for the use of microspheres without a binder.

In stark contrast, Chenoweth et al. is solely limited to an insulating material with fibers “which have been intimately combined with a thermosetting resin” (Abstract). This thermosetting resin “bonds the fiber matrix together” (col. 2, ll. 60-61) and thus serves as the binder. Indeed, Chenoweth et al. expressly states that it is “an object of the invention to provide a non-woven matrix of glass and homogeneous and bi-component synthetic fibers having a thermosetting resin dispersed therethrough” (col. 3, ll. 34-37) (emphasis added).

Summarizing, McGregor teaches that the use of microspheres “alone or unadhered” to any binder is highly desirable, while Chenoweth is solely limited to a binder and fails to mention any microspheres. A skilled artisan reviewing the teachings of McGregor would thus be discouraged from providing microspheres in the product of Chenoweth. In proposing that it would be “obvious” to combine the features of these references, the Examiner completely ignores their divergent teachings, which would actually lead a skilled artisan away from the combination. See, e.g. *In re Gurley*, 27 F.3d 551, 553, 31 USPQ2d 1130 (Fed. Cir. 1994) (“A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be . . . led in a direction divergent from the path that was taken by the applicant.”). Such a “teaching away” has long been considered inimical to a finding of obviousness. See *KSR Int’l Co v. Teleflex, Inc.*, 127 S.Ct. 1727, 1742 (2007) (explaining that when the prior art teaches away from a combination, that combination is more likely to be

nonobvious). Accordingly, Applicant submits that upon considering the teachings of the references “as a whole,” the conclusion is inescapable that their teachings would not be combined, and a *prima facie* case of obviousness is therefore lacking.

In the Advisory Action, the Examiner invokes *KSR Int’l Co v. Teleflex, supra*, alleging that it supports the obviousness rejection made with respect to claims 44-46 and 50. Specifically, it is contended that this case “supports the conclusion that the claim would have been obvious because substitution of one known element for another would have yielded predictable results to one of ordinary skill at the time the invention was made.”

First of all, Applicant’s claimed “microspheres” are not a “substitution” for any “known element” from the prior art. Hence, the purported holding of *KSR* as interpreted by the Examiner, even if accurate, is inapposite to the present situation.

Secondly, citation to this passage from *KSR* does not dispense with the need to identify a reason to combine the teachings of the references, using articulated reasoning based on a rational underpinning. See *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329 (Fed. Cir. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”). Here, such a reason and the corresponding underpinning is lacking. Instead, the Examiner simply appears to be combining isolated teachings from disparate references, which has long been assailed in formulating obviousness rejections, as specifically recognized by the Court in the *KSR* decision. See *KSR Int’l Co v. Teleflex, Inc.*, 127 S.Ct. 1727, 1742 (2007) (“a

patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art”).

Claims 18-19 and 22-23 refer to a surfacing veil wherein the outer polymer annulus comprises a low melt copolymer polypropylene or polyethylene. The Examiner admits that these materials are not mentioned anywhere in Chenoweth, but cites to U.S. Patent No. 5,840,637 to Denton et al. (“Denton”) as showing that “these materials are equivalent structures known in the art.”

First of all, Applicant respectfully submits that this is not the proper analysis for a rejection based on obvious. Rather, there must be a reason to combine the teachings of the references. See *KSR Int’l Co v. Teleflex, Inc.*, *supra*. (recognizing the importance of identifying “a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.”). Here, the Examiner provides absolutely no reason to combine the teachings of these references to arrive at the claimed inventions, either in the non-final or final versions of the rejections made.

Secondly, simply because Denton provides a listing of various types of bicomponent fibers does not mean that all such fibers are “equivalents.” The Examiner in the final Office Action states that polyethylene or polypropylene is established as being “suitable equivalents for a sheath-core fiber structure.” Even if correct, it is a *non sequitur* to conclude that it would be “obvious” to use such in the claimed combinations. Accordingly, reconsideration is respectfully requested, since a *prima facie* case of obviousness is lacking with respect to claims 18 and 19, as well as

for claim 23 (which also requires that the outer polymer annulus recited in claim 1 comprise a low melt copolymer polypropylene).

In summary, none of the pending claims are anticipated or rendered obvious in view of Chenoweth or the other cited references, so the rejections should be withdrawn and all pending claims formally allowed. Upon careful review and consideration, it is believed the Examiner will agree with this proposition. Accordingly, the early issuance of a formal Notice of Allowance is earnestly solicited to avoid the need for bringing this matter before the Board. Authorization is given to charge any fees required to Deposit Account No. 50-0568 in connection with this Amendment document.

Respectfully submitted,

By: /Margaret S. Millikin/
Margaret S. Millikin
Reg. No. 38,969

Owens Corning
2790 Columbus Road, Route 16
Granville, Ohio 43023.1200
(740) 321-5359